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ABSTRACT

A survey of English majors at the University of Southern Maine concerning the subject of curricular reform allowed a professor involved in the planning of the project to compile several "dos" and "don'ts" in an appendix titled "A Few Basic Principles of Questionnaire Design." These guidelines, however, require some qualification, since a questionnaire for English majors may permit deviations from some standard rules. Some experts might object to the administration of a survey during regular class sessions when participation is enforced by an authority figure, but the effectiveness of the method must be acknowledged nevertheless: the number of zero responses to the essay questions in this case proved to be less than 2%. Some data-gathering experts would also protest open essay survey questions, but again no approach can be excluded from the realm of possibility without due consideration of the particular goals of the survey. However, an analytical device called Coding Frames should probably be considered indispensable by any committee faced with the task of intelligently deploying information garnered through essay answers. Finally, surveys in English departments should beware of questions that could threaten the respondent, such as one on this survey that asked about the student's sexual orientation. The negative responses it drew suggest that it may have colored responses to the whole survey. (Appendix A, Sample Coding Frames, and Appendix B, A Few Basic Principles of Questionnaire Design, are attached.) (TB)

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Maximizing the Value of Data Collected Through Using Student Questionnaires as a Tool in Curricular Reform: The Questionnaire's Design

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As Catherine Marsh points out in *The Survey Method*, "a society with a bureaucracy of any complexity needs occasional data-gathering exercises in order to administer efficiently, to assess manpower available for war, to levy taxes, and for other reasons" (10). It is not surprising, then, that the sophisticated administrative networks developed by such ancient cultures as the Egyptians, the Chinese of the Ming Dynasty, and especially the Sumerians of approximately 2700 BC, all engaged in data collection of astonishing breadth and refined methodology. In western European culture, the history of modern survey methods perhaps begins with the repeated efforts in fourteenth-century England to ascertain the mortality rates caused among different segments of the population by the Black Plague.

From these "political arithmetics," as they were called (Marsh 8), descend the modern sciences of demo- and socio-graphics. Also in the last phases of the High Middle Ages may be found the first expressions of doubt concerning the accuracy of surveys, and the first ruminations on how to improve survey methods. Although documents analogous to "questionnaires" in their modern form were not used until well beyond the Middle Ages, we nevertheless are justified in assuming that almost for as long as questionnaires have been employed, certain educated segments of society have been detecting their possible deficiencies and proposing methods to increase their validity. My words today continue this process of self-examination, specifically within the framework of using questionnaires as a component in the array of devices put to the service of curricular reform.

Because the time given to me today is brief, I have arranged my talk as a commentary on selected items in my second appendix, the one entitled "A Few Basic Principles of Questionnaire Design." (See Appendix B.) I begin with item A in Part II of this appendix, which states that questions eliciting essay answers of indefinite length should be avoided. Although this dictum is ubiquitous in research by social scientists into survey methods, an even more fundamental principle should be recalled here. As Abraham Oppenheim states,

> A questionnaire is not just a list of questions or a form to be filled out. Like all scientific instruments, it must be specially designed according to particular specifications and with specific aims in mind. We cannot judge a questionnaire as good or bad, efficient or inefficient, unless we know what job it is was meant to do. No single approach is always necessarily superior. (28)

In that questionnaires utilized for curricular reform occupy a very specific epistemological environment, one that differs from those of most surveys, the general disapprobation of open-ended questions warrants some skepticism. At the University of Southern Maine, the questionnaire written for current English majors was administered to the respondents within regular class sessions, a strategy that some may protest, but which had the effect of securing a "captive" respondent field. Because of the

proxemics, therefore, and because the survey environment included the presence of a figure representing institutional authority, students undoubtedly felt obliged to answer all questions at some length, and to approach the endeavor seriously. Setting issues of authority and environment aside, however, those of us who use questionnaires on a target audience of English majors probably can expect the particular type of training these students have received to increase the quality and quantity of answers written in essay form. Both factors undoubtedly contributed to the success of using questionnaires at the University of Southern Maine: the number of zero responses to the essay questions proved to be less than 2%, a response rate that certainly could not be achieved in a less structured environment, and possibly not with students from most disciplines other than English, regardless of the survey environment.

Nevertheless, even if one chooses to ignore or accept the possible ethical breaches (or bendings) in exploiting the classroom environment, extensive use of essay questions possesses certain disadvantages. Primary among these is the interpretation of data. Although this topic intrudes somewhat on the subjects to be covered by the speakers who follow me today, I should at least point out that a wealth of student essays may promote a wealth of interpretive acts on the part of committee members to whom the data analysis is entrusted: interpretive acts that may be too selective, too generalizing or fundamentally impressionistic. In short, without some analytical device to impose structure on the interpretation of data embedded in essays, the raw material may easily be brought forward to support any number of diverse and even conflicting opinions. For this reason, the analytical device called Coding Frames should probably be considered indispensable by any committee faced with the task of intelligently deploying information garnered through essay answers.[1] Coding Frames consist of classificatory categories generated partly by the responses actually received and partly by the "experimental variables"—i.e., the factors whose effects, the causes and predictors, we are trying to study. It must be stressed, however, that utilizing Coding Frames, no matter how well they are constructed, inevitably results in information *loss*. But in the context of curricular reform, this loss may be counterbalanced by the free-form discussion of the open-ended questions that undoubtedly will be budgeted into the committee's negotiation procedures. I have provided two rather crude illustrations of Coding Frames in Appendix B, which can be explained further during the discussion period.

My second and final expansion of guidelines in Appendix B actually refers to several items listed there, but especially to item H in Part II. Another dictum firmly held by most scholars of survey theory and practice involves what is referred to as "question threat." Indeed, the problem of question threat has provoked three book-length studies, and also led to the formation of the Marlow-Crown Social Desirability Scale, which has been used since 1964 in major national surveys. This scale was devised "to identify particular respondents who are most likely to distort their answers to survey questions in what they perceive to be a socially desirable direction" (Bradburn and Sudman 86). In *Improving Interview Method and Questionnaire Design: Response Effects to Threatening Questions in Survey Research*, Norman Bradburn and Stephen Sudman point out that "We can distinguish two situations in which respondents' motivations to distort their responses might be aroused. The first situation involves questions about behaviors that are illegal or contranormative or about behaviors that are not usually discussed in public without some tension" (64).

Almost paradoxically, although considerations of question threat may seem *a fortiori* to be most cogent to open-ended questions seeking attitudinal information, in fact, the reliability of answers to closed questions seems to be most endangered by questions that unintentionally alienate or offend the respondents or that provoke them to adjust their answers according to their knowledge of what is socially desirable or normative. For instance, in a 1968 survey of respondents who all had been convicted of driving while intoxicated, 35% of the respondents falsified their answers to the principal closed questions involving drunken driving. Closer to our own interests, it should not be surprising that in a contemporary culture that has destabilized the fixed meanings of such nomenclature as "married/unmarried," "employed/unemployed," and "racial origin," the possibility of alienating or incurring the hostility or

distrust of a respondent field with certain questions has become a sensitive issue.

The questionnaire used by my school, which included in its demographic section a multiple-choice closed question concerning "sexual orientation," provides an interesting model for evaluating questions in regard to their potential to cause perceived threat. Including this question was enthusiastically debated by members of the planning committee, with insightful and persuasive arguments advanced by both proponents and opponents. But the results seem to verify the reservations expressed by the opponents. Of 88 respondents, 24 answered "no response." This extreme negative response rate, particularly in light of its anomalous nature when seen in the context of high response rates to all other questions, is striking enough; but even more significant are the several responses—11 in all—that express disapproval of the question. These include "I can't believe you're asking this" and "What on earth does this have to do with the curriculum?" Most sobering, perhaps, is that not a single student identified himself as "gay," although 3 answered that they were bisexual and 2 that they were lesbian. In addition to proving the very high degree of threat intrinsic to this question, the responses, far from providing statistics that could be used to demonstrate the need for classes emphasizing gender and sexual orientation studies in a new curriculum, might actually be cited in arguments to the contrary.

Appendix A
Sample Coding Frames

Sample #1: A Coding Frame for the Question:
Question: "Why did you become an English Major?"

Label	Coding Frame Category	Reason for Inclusion	Responses *(30 in sample)*
$1\alpha^2$	don't know; no particular reason	demographic profile	2
2α	no answer; answer not ascertained	demographic profile	4
3α	gender: male	demographic profile	9
4α	gender: female	demographic profile	21
5	works full-time or more than 20 hours per week outside home	responses	24
6	writes fiction/poetry/drama independently	responses	14
7	wishes to teach on elementary or secondary level	responses	11
8	wishes to become a professional writer, possibly a journalist	responses	18
9	has always been an avid reader/writer and/or has always been strong in English	responses	16
10	English is the best "all-purpose" major	responses	6
11ß	interested in theories concerning how texts and cultures influence each other	hypothesis	1
12ß	was advised that English is a good major for pre-law studies	hypothesis	2
13ß	wishes to earn Ph.D. and perform research and teach on college level	hypothesis	0
14ß	because of discontinuation of USM's undergraduate major in Eduction	hypothesis	2

Sample #2: A Coding Frame for the Question:
"Are there any courses that you have found especially valuable?
Please specify. What did you find most valuable in these courses?"

Label	Coding Frame Category	Reason for Inclusion	Responses *(30 in sample)*
1α	don't know; no particular opinion	demographic profile	0
2α	no answer; answer not ascertained	demographic profile	2
3α	gender: male	demographic profile	9
4α	gender: female	demographic profile	21
5	total credit hours of 60 or more	responses	19
6	genre courses in poetry and/or drama and/or fiction	responses	15
7	"creative" writing courses	responses	21
8	courses in theory and/or courses related to popular culture	responses	7
9	no valuable courses (or very few) taken	responses	2
10	all or nearly all courses taken	responses	5
11	1 or more named courses in Group A†	responses	11
12	1 or more named courses in Group B‡	responses	7
13ß	courses related to some aspect of respondent's personal or social life	hypothesis	15
14ß	courses in linguistics	hypothesis	3
15ß	single-author courses	hypothesis	4
16ß	courses emphasizing women's writing and/or gender issues	hypothesis	2

† Group A: Chaucer, Images of Masculinity, Romantic Writers. *(Excludes courses falling into categories 3-5 and 11ß-13ß.)*

‡ Group B: Early English Novel, Advanced Writing, Arthurian Lit. *(Excludes courses falling into categories 3-5 and 11ß-13ß.)*

Appendix B

A Few Basic Principles of Questionnaire Design, with Particular Reference to Using Questionnaires To Assist Curricular Reform

I. Preliminary Considerations and Preparations.[3]

A. Use questionnaires only for information not directly available from other sources.

B. Unless a survey's response rate is very high (over 90%, according to some analysts), the results will not represent what the results would have been if all or most of the questionnaires had been returned. Questionnaire designers should establish in advance the figure that constitutes a satisfactory return rate.

C. Selected members of the respondent field may be asked to participate in preliminary discussions and/or in designing the questionnaire.

D. Somewhat paradoxically, anticipated results must be studied *before* the form is completed. Most important, the planning committee must discuss the extent to which their future actions will be guided by the data they collect.

E. Unless absolutely infeasible for reasons determined by time and funding, the questionnaire should be pilot tested well in advance of its administration to the actual respondent field. If possible, allow time for analyzing the data collected in the pilot test and for making revisions in the questionnaire accordingly. A pilot administration may utilize a "Delphi" panel (i.e., a group of experts) and/or a control group representative of the actual target audience.

F. In cases of surveys conducted by telephone or by mail, a follow-up contact is essential and must be figured into the overall time frame for the study.

G. Decide in advance if the survey's purpose is seen by the designers as descriptive, predictive, or some combination of the two. If a combinative questionnaire is intended, dialogue between committee members concerning the relative proportions of descriptive/prescriptive questions is essential.

H. Insure that at least one member of the committee has training and expertise in visual design and lay-out. Do not cut costs by producing a questionnaire that is not maximally inviting to the eye.

II. Questionnaire Design.

A. Avoid "open-ended" or "free-form" questions requiring even brief essay answers. This guideline is *least* important (or even inapplicable) in all survey formats involving "captive" respondents (e.g., questionnaires completed in controlled environment with an authority figure present) and *most* important with surveys using non-"captive" respondents (e.g., telephone and mail surveys) and least important in surveys using captive respondents.

- "Coding Frames" are a device to maximize the interpretation of data gathered through open-ended questions.

B. Respondents must understand and respond to the question *as it is understood by those conducting the research* if the responses are to be valid. All questions therefore must be scrutinized (by the designers) for vagueness to the extent of questioning words that in other contexts are unambiguous and innocuous.

- Be particularly careful with adjectives and adverbs (e.g. "usually," "several," "rarely") and high-frequency words (e.g. "we" and plural/singular "you[r]").

- Do not make unrealistic demands on the respondents' knowledge or memory. Do not overestimate this knowledge or memory. Assume that many respondents will refuse to answer a question, or give only a vague response, rather than search their memories rigorously and/or cogitate on a problem at length.

- In a U.S. Survey conducted in 1978, respondents were shown a bottle of orange juice and asked "How much orange juice do you think this bottle contains?" Responses, some of them repeated by many respondents, included: (1) "one orange and a little water and sugar"; (2) "full-strength"; (3) "not much"; (4) "most of it"; and (5) "juice of one-half dozen oranges" (Platek 35).

C. Choose question types from tested formats: (1) free or open-ended questions; (2) closed/open questions; (3) multiple choice questions (with choices provided or not provided); (4) dichotomous questions; (5) fill-in-the-blank questions; (6) and Lehnert Scale questions using an axis with one terminus marked "strongly agree" or "very helpful" and the other marked "strongly disagree" or "not helpful at all."

D. In the wording of questions, use the language—even the jargon and slang—of the respondent group.

E. Do not (1) phrase individual questions or (2) sequence questions or (2) sequence options to multiple choice questions in ways that may influence the responses.

- The human brain unconsciously and unremittingly searches for patterns. Respondents therefore will attempt to discover a key within the structure of the questionnaire that will tell them which responses will be considered normative by the analysts. With this in mind, intentional or perceptual inter-relatedness between individual questions and between groups of questions must be analyzed repeatedly, and by different analysts, before the questionnaire is administered.

F. Use filter questions sparingly and only for specific reasons.[4]

G. Options provided for multiple questions must be independent and mutually exclusive, unless a statement is added that choosing more than one option is appropriate. Providing an option such as "do not know" or "not qualified to answer" is essential, for failing to do so may lessen the accuracy of the response field by as much as 40%.

- Ideally, every question will be "omnicompetent," i.e, capable of coping with all possible responses.

- In a major survey conducted in 1990, respondents were asked: "Do you think most manufacturing companies that lay off workers during slack periods could arrange things to avoid layoffs and give steady work right through the year?" 63% of the respondents said companies could avoid lay-offs, 22% said the companies could not avoid lay-offs, and 15% had no opinion. When the question was altered to read "Do you think most manufacturing companies that lay off workers during slack periods could arrange things to avoid layoffs and give steady work right through the year, or do

you think layoffs are unavoidable?" and administered to a respondent group identical in demographic profile to the first group, 34% answered that companies could avoid layoffs; 41% said lay-offs are unavoidable, and 24% had no opinion." Data for the principal question (i.e., whether or not lay-offs are unavoidable) varied by 22%.[5]

H. Be sensitive to the potential for "question threat." Douglas Berdie states that "Questions about sexual behavior, violence, race and minority groups, politics, religion, family finances, and patriotism have a certain offensive potential. Moreover, questions about such areas are often asked when the information is not essential to the study purpose. At other times, however, questions which deal with such potentially offensive topics may be crucial to a study and therefore must be asked" (49).

I. Scalar questions must include an equal number and degree of options on each side of a middle position. Options marked "undecided" and "neutral" may signify different meanings in different contexts. Using one word or phrase rather than the other as the middle position may influence the validity of the response data.

- Consider carefully each question's potential to offend a segment of the respondent field. Any question with a high potential to cause alienation should be excluded or reframed or reconceptualized.

J. Recent research indicates that the conventional method of opening questionnaires with questions intended to gather demographic information may be counter-productive, because the staccato quality of such questions distances or bores the respondent field. Furthermore, these questions (e.g., questions concerning marital status, gender, financial status) can no longer be considered as bland and innocuous as they were held to be less than a generation ago. Stanley Payne recommends displacing the block of demographic questions with an engaging, non-threatening, open-ended question (178).

Notes

[1] See Oppenheim for a detailed discussion of Coding Frames, with several examples.

[2] Note that Greek α and ß are used to designate classificatory categories belonging to coherent groups. Because the group of categories constructed for one question or set of questions may vary from another group, it is helpful to use a system that makes a category recognizable at a glance. Thus, α always indicates that a category has been included for demographic reasons; ß always indicates a category that has been included to test an hypothesis.

[3] The guidelines in this appendix draw on all the sources given in Works Cited, but especially on Berdie and Anderson's *Questionnaires: Design and Use.*

[4] See Oppenheim and Payne for definitions and criticisms of filter questions.

[5] See Berdie 68 ff. for a discussion of this survey's results.

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